

Date: Fri, 12 Aug 94 08:01:03 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #902
To: Info-Hams

Info-Hams Digest Fri, 12 Aug 94 Volume 94 : Issue 902

Today's Topics:

 "We..."
 6 meter HELP-> New to the band
 August 11, 1994 Mid Atlantic Hamfest List
 Crossband repeating rigs & auto IDers (2 msgs)
 Farnsworth Method in Code Exam
 Military Radio
 orbs\$224.misc.amsat
 PK232MBX EPROM (U2)
 Question about power supply for HTX-202.
 Repeaters at Rehobeth Beach, DE?
 RFI to a smoke detector
 TM-733 Mods Needed. (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 10 Aug 1994 21:42:28 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!math.ohio-state.edu!
hobbes.physics.uiowa.edu!newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!crcnis1.unl.edu!
unlinfo.unl.edu!gbrown@network.ucsd.edu
Subject: "We..."
To: info-hams@ucsd.edu

Cecil_A_Moore@ccm.ch.intel.com wrote:
: In article <32b0p4\$drrd@crcnis1.unl.edu>,
: gregory brown <gbrown@unlinfo.unl.edu> wrote:
: >The other day I heard the best (!) use of the ham-radio "we" I've

: >heard yet...overheard: "We just had an operation to remove a
: >blood-clot in our leg". Now that would be a sight! >Greg WB0RTK

: Hi Greg, you may not know the origin of the term "we" as far as ham
: radio goes. It is a side effect of learning Morse Code which tends
: to split the brain into two distinct parts, one for normal stuff and
: one for emulating a modem. The split is so severe that the individual
: perceives two distinct entities existing within his brain and starts
: referring to himself as "we". It must be true because it happened to
: us right after we got our first ham ticket.

: 73, Cecil, KG7BK, 00TC (Not speaking for Intel)

Gee, Cecil, I was hoping to elicit something besides another rap on
CW! Actually, it is those damn modems which are emulating we old CW
operators. Why, back when I was a kid (-:-), they didn't even _have_
modems! Seems machines are always taking over our creative efforts.
They are fast, accurate, and stupid, and they don't know how to have a
good time! I've been enjoying Morse since I was 11, and our
(oops...MY) brain is still in one piece!

Weeeeeeee!

Greg WB0RTK

Date: 10 Aug 1994 22:11:57 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!usenet.ins.cwru.edu!
cleveland.Freenet.Edu!ah157@network.ucsd.edu
Subject: 6 meter HELP-> New to the band
To: info-hams@ucsd.edu

I can get a crystal controlled radio with 30 watts output for 6 meer.
meter that is.

What is 6 meter like, is tehre a lot of dx or just local?
How far on an average day will 30 watts carry?
I heard 500 to 1000 miles is not out of the question with 6 meter.
Pleae leave any and all help in EMAIL.
Thanks
Rob
KB8SQH

Date: 11 Aug 1994 18:21:31 -0400
From: news1.digex.net!digex.net!not-for-mail@uunet.uu.net

Subject: August 11, 1994 Mid Atlantic Hamfest List
To: info-hams@ucsd.edu

MID-ATLANTIC HAMFEST LISTING

August 11, 1994

The following is a listing of known hamfests in the Mid-Atlantic area. I will update this list as necessary. Please send any additions or corrections to me at cps@access.digex.net so that others may benefit.

If you know of any hamfests not in this list, please let me know about them so that they may be included in the next edition.

Hamfests that I know of, but need details: York, PA (Sept).

Thanks,

Chris Smolinski, N3JLY

(*) Marks new additions / revisions.

August 14, 1994:

WESTMINSTER, MD

SARA Carroll County Hamfest, 8AM-?, \$5 adm, \$5 tailgating, \$8 tables

Carroll County Ag Center, Smith Ave, Westminster, MD

Contact: Alan Parker, KS3L, (410) 859-1475

SARA Hamfest, 607 Brentwood Rd, Linthicum, MD 21090

Talk-In 146.52, 224.68, 224.64

EASTON, PA

Hamfest & Computerfest, 8AM-?, \$4 adm, \$7 tailgating, \$25 tables

Career Institute of Technology, Easton, PA

Delaware-Lehigh ARC, RR 4 Greystone Bldg, Nazareth, PA 18064-9211

(610) 820-9110

Talk-In 146.70

September 11, 1994:

* GAITHERSBURG, MD

F.A.R. FEST '94 8AM-3PM, \$5 adm, \$10 tailgating

Montgomery Co Fairgrounds, exit 11 of I-270, Gaithersburg, MD

Contact Al Brown (301) 490-3188 for information

Talk-In 146.955-, 443.400+, 146.520

September 17&18, 1994:

VIRGINIA BEACH, VA

Virginia Beach Hamfest \$6 adm, \$15 tailgating, \$30 tables, \$125 booths

Virginia BEach Pavillion

Manny Steiner, K4DOR, 3512 Olympia Lane, Virginia Beach, VA 23452

(804) HAM-FEST

September 18, 1994

PENNSAUKEN, NJ

South Jersey Radio Assn, 8AM-3PM, \$5 admission, \$5 tailgating

Pennsauken High School Parking Lot, near US rt 130 / NJ rt 73

Contact Diane Nafis, N2LCQ, (609) 227-6281, (609) 228-8088

VEC Test Session registration at 9:30 AM

Talk-In 145.290-

October 9, 1994

* Shore Area Hamfest '94 8AM-3PM

Brookdale Community College. Lincroft, NJ

Contact Al Allen, K2LG 908-495-3246

October 16, 1994

* BUCKS CO, PA

Tradefest '94, 8AM-12PM, \$5 adm, \$8 tailgating.

Robert Yezzi Fairgrounds, I-95 to Rt-132 West to Rt-513.

Talk-In 145.25/65, 146.925/325

October 30, 1994:

WESTMINSTER, MD

Mason Dixon Hamfest 8AM-?, \$5 adm, \$5 tailgating, \$15 tables

Carroll County Ag Center, Westminster, MD

Mason Dixon Hamfest, PO Box 763, Hanover, PA 17331

VE exams \$5.60, 9AM, reg 8AM, Page Evans NE3P, (717) 359-7610

Talk-In 145.410-

Date: 11 Aug 1994 14:15:48 GMT
From: unix.sri.com!headwall.Stanford.EDU!agate!howland.reston.ans.net!
cs.utexas.edu!convex!news.duke.edu!duke.edu!jbs@hplabs.hpl.hp.com
Subject: Crossband repeating rigs & auto IDers
To: info-hams@ucsd.edu

In article <776570615.88snx@n2ayj.overleaf.com> n2ayj@n2ayj.overleaf.com (Stan Olochwoszcz N2AYJ) writes:

>
>You are correct, sir, but the original post implied to me that there
>was not a regular repeater involved (2m simplex was mentioned).

True, although using it as a repeater extender can also be very helpful at times (our club once had to set one up in order for operators sending traffic for firemen and policemen at a major fire downtown between tall buildings to be able to hit the repeater).

>The other vision is a single mobile x-banding with the "base" on
>one freq and the field guys on the other.

This is almost the scenario I had in mind. The field operators and the base would all transmit on one band and all receive on the other.

> Since the x-band radio
>transmits both ways, the same "WX2ABC repeat" tagged onto a call in
>either direction should also meet the requirements.

True, but it would still be nice for the operators not to have to worry about remembering to ID the repeater, especially in an emergency setting when you want to keep verbiage to a minimum.

> (Remote control of
>The Repeater is a whole other matter, but if WX2ABC just sat in the car...)

With the pizza and drinks, of course...

-joe

--

"When personal freedom's being abused,		"In Canada we have something called
you have to move to limit it."		multiculturalism - you will find the
		whole spectrum of races living in
- U.S. President Bill Clinton, 1994		Toronto's slums." -A Canadian

Date: 12 Aug 1994 03:22:20 GMT

From: ihnp4.ucsd.edu!munari.oz.au!yarrina.connect.com.au!
harbinger.cc.monash.edu.au!yeshua.marcam.com!zip.eecs.umich.edu!quark.gmi.edu!
chiner@network.ucsd.edu
Subject: Crossband repeating rigs & auto IDers
To: info-hams@ucsd.edu

Stan Olochwoszcz N2AYJ (n2ayj@n2ayj.overleaf.com) wrote:

: You are correct, sir, but the original post implied to me that there
: was not a regular repeater involved (2m simplex was mentioned). I don't
: think it was so much a case of a "repeater extender" that was being
: sought as a high-up kick to get around the hills and out of the
: dales*. If this were the case...

: 2m HT---> 2m x 440 mobile---> 440 HT
: and
: 440 HT---> 440 x 2 mobile---> 2m HT

: wouldn't the two-rigs constitute a SINGLE repeater? As long as
: each op ID'ed "The Repeater", you have an id on each freq, thus are legal.

A group of ham friends of mine, used to get together at a
restaurant late wednesday nights, and check into a net on
a (fairly) distant 2m repeater (about 50 miles).
Inside the restaurant, with HTs and big 5/8s, we could barely
hear the 350 watts of the repeater, let alone get into it...
Now, we discovered that a 5 watt HT with a big mobile antenna
in the parking lot, could get into the repeater...

So, we set up the HT into crossband... And we could get into
the repeater... Then we decided, now, if only we could hear
it better... so, we setup a second HT crossbanding the
repeater back to us (low power... even then, that little
Icom W2A would get toasty hot)...

Kinda nice, one of the guys had a 440 repeater pair for the area
that wasn't at use... so we just used that.

Eventually, we got some mobiles... and that made it alot
easier... for ID'ing, we playing around with using a KPC3
with it's CW id... although, we also built some strange looking
circuits to do it also...

Enough of my rambling... :)

--

Chris Hiner N8TZQ

One of these days, I'll find a .sig I like, and Steal it..

Date: 11 Aug 1994 14:07:23 GMT

From: ihnp4.ucsd.edu!sdd.hp.com!math.ohio-state.edu!howland.reston.ans.net!
vixen.cso.uiuc.edu!newsrelay.iastate.edu!news.iastate.edu!isuvax.iastate.edu!
TWP77@network.ucsd.edu
Subject: Farnsworth Method in Code Exam
To: info-hams@ucsd.edu

In article <32ccp3\$i0s@scunix2.harvard.edu>, ys@isr.harvard.edu (Yuzuru Suzuki)
writes:

>I just wanted to clarify how the Farnsworth method is used in the
>code exam. It depends on a particular VEC. In the case of the ARRL,
>it is used as follows:

>

>* Element 1A (5 WPM): Character Speed = 18 WPM

>* Element 1B (13 WPM): Character Speed = 18 WPM

>* Element 1C (20 WPM): Character Speed = 20 WPM

>

>Thus, the Farnsworth method is used in Elements 1A and 1B, but NOT
>in 1C. This is documented in ARRL's Volunteer Examiner Manual,
>6th edition, copy right date 1991, 3rd printing, 1993, page 54.

I thought I read this somewhere. This would be the place!

Date: Thu, 11 Aug 1994 09:03:58
From: ucsnews!sol.ctr.columbia.edu!spool.mu.edu!howland.reston.ans.net!gatech!
nntp.msstate.edu!olivea!charnel.ecst.csuchico.edu!yeshua.marcam.com!
insosf1.infonet.net!news.i-link.@@ihnp4.ucsd.edu
Subject: Military Radio
To: info-hams@ucsd.edu

I'm looking for a guest to be on the Ham Radio & More show that is a
military radio veteran that could discuss non-classified aspects of
radio used in counterintelligence measures and other information
gathering techniques. It would be most interesting to the average ham as
well as to the non-ham. Please e'mail me if you can help or have a
suggestion. Ham Radio & More is on the Talk America Network in over
20 cities and via satellite on Spacenet 3, Transponder 9, 6.8 audio each
Sunday at 6:00pm EST.

73, Len, KB7LPW

Date: 12 Aug 94 14:12:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: orbs\$224.misc.amsat
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-224.M
Orbital Elements 224.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM WA5QGD FORT WORTH, TX August 12, 1994
BID: \$ORBS-224.M
TO ALL RADIO AMATEURS BT

Satellite: POSAT
Catalog number: 22829
Epoch time: 94222.67439280
Element set: 305
Inclination: 98.6468 deg
RA of node: 298.0041 deg
Eccentricity: 0.0011062
Arg of perigee: 39.6969 deg
Mean anomaly: 320.5021 deg
Mean motion: 14.28036108 rev/day
Decay rate: 1.4e-07 rev/day²
Epoch rev: 4547
Checksum: 287

Satellite: MIR
Catalog number: 16609
Epoch time: 94221.93487962
Element set: 704
Inclination: 51.6487 deg
RA of node: 277.5061 deg
Eccentricity: 0.0001334
Arg of perigee: 205.0665 deg
Mean anomaly: 155.0254 deg
Mean motion: 15.56756678 rev/day
Decay rate: 1.989e-05 rev/day²
Epoch rev: 48439
Checksum: 334

Satellite: HUBBLE
Catalog number: 20580
Epoch time: 94221.91677644
Element set: 516
Inclination: 28.4699 deg
RA of node: 250.8342 deg
Eccentricity: 0.0005776
Arg of perigee: 289.4246 deg
Mean anomaly: 70.5718 deg
Mean motion: 14.90651651 rev/day
Decay rate: 2.93e-06 rev/day²
Epoch rev: 3741

Checksum: 315

Satellite: GRO
Catalog number: 21225
Epoch time: 94222.22017830
Element set: 124
Inclination: 28.4631 deg
RA of node: 216.9834 deg
Eccentricity: 0.0003669
Arg of perigee: 113.1425 deg
Mean anomaly: 246.9566 deg
Mean motion: 15.41125810 rev/day
Decay rate: 1.390e-05 rev/day^2
Epoch rev: 6528
Checksum: 267

Satellite: UARS
Catalog number: 21701
Epoch time: 94223.22221574
Element set: 571
Inclination: 56.9861 deg
RA of node: 298.5128 deg
Eccentricity: 0.0005302
Arg of perigee: 112.2272 deg
Mean anomaly: 247.9264 deg
Mean motion: 14.96568100 rev/day
Decay rate: -2.055e-05 rev/day^2
Epoch rev: 15917
Checksum: 284

/EX

Date: 11 Aug 1994 23:09:28 GMT
From: news.delphi.com!gilbaronw0mn@uunet.uu.net
Subject: PK232MBX EPROM (U2)
To: info-hams@ucsd.edu

Date: Fri, 12 Aug 1994 06:48:42 GMT
From: vigra.com!news.vigra.com!steve@network.ucsd.edu
Subject: Question about power supply for HTX-202.
To: info-hams@ucsd.edu

=> On Wed, 10 Aug 1994 13:11:10 GMT, gary@ke4zv.atl.ga.us (Gary Coffman) said:

> This is a basic Ohm's Law problem. Model the circuit like this:

```
>  -----  
>  +|                |  
> Bat 13.8V          Radio 6.9 ohms  
>  -|-----|
```

> Assume the radio is a resistor (it's the load), and that if the radio
> normally needs 2 amps at 13.8 volts, it has a resistance value of 6.9
> ohms. Now it doesn't matter how much current the 13.8 volt supply is
> *capable* of producing, at 13.8 volts it can only push 2 amps through
> a 6.9 ohm resistor. $I=E/R$ or $13.8/6.9=2$ amps. The only way the supply
> can push more than 2 amps through the radio is if the supply *voltage*
> is increased, or the radio resistance is somehow decreased (it can do
> that by outputting more RF or AF power).

This is interesting. When I got my Yaesu FT-530, I made some crude measurements of the power consumption and found that it never draws more than 1.1 amps on 2m (slightly less on 440) . If you apply 6 volts, it draws the least. Then it draws gradually more current as you turn up the supply voltage, until it gets to about 10.5 volts. It draws 1.1A at 10.5V, and stays that way up to 16V (the max rated voltage). I didn't go higher, since it's my pride and joy. :-)

The receive portion is even more constant. When sitting idle on both bands with no power saving enabled, it draws around 100 mA. It does this at *any* voltage level (6-16). It seems to be a constant-current load for idle standby. Of course, incoming audio, loud volume settings, LED backlighting, and other stuff turns up the current draw.

I realize your resistor model was only an approximation, but I was surprised to see that it controls its current so consistently over the voltage range. I could have measured it wrong, but that's what it looked like.

Happy Hacking!
-Steve

Steve Haehnichen
steve@vigra.com

Vigra, Inc. San Diego, CA
(619) 597-7080 x116 Fax: (619) 597-7094

Date: 11 Aug 1994 19:50:28 -0400
From: news1.digex.net!access3!bote@uunet.uu.net
Subject: Repeaters at Rehobeth Beach, DE?

To: info-hams@ucsd.edu

andy@clark.net (Drew Cohn) writes:

>Anyone been to Rehobeth Beach in Delaware lately? Find any new 2 meter
>repeaters? Don't seem to see anything in the repeater directory.

K3JL is on 147.075 MC.

You will likely be able to hit the O.City repeater with
a mobile radio on 147.015, using 5A PL. You can also decode 5A
on your end if you tire of hearing weak distant repeaters.

Mark has a UHF repeater in O.City on 443.45 MC, also
using 5A PL.

Now, N30LY has a brand spanking new repeater coordinated
on 147.33 MC. I don't know if it is on the air yet.

--

rec.nude: your exit to good living along the Information Toll Road.
finger bote@access.digex.net for PGP key and an operator will help you.
Por via del empedrado de informacion.

Date: 11 Aug 1994 23:09:40 GMT
From: news.delphi.com!gilbaronw0mn@uunet.uu.net
Subject: RFI to a smoke detector
To: info-hams@ucsd.edu

I have a big problem with the smoke detectors in my home. They squeal when I
transmit on 40 meters. They are the type that are permanently wired to the
ac line. Has anyone had this problem and knows what to do about it. I can
try bypasses or chokes or some such thing on the line I guess? I may have to
go to a battery operated detector perhaps? Any thoughts on this from anyone?
Respond here and if you have really important information please email me
too at gilbaronw0mn@delphi.com. Thanks in advance.

Gil Baron, El Baron Rojo, WOMN Rochester,MN
"Bailar es Vivir"
PGP2.X key upon request

Date: 11 Aug 1994 18:29:22 -0400
From: montego!not-for-mail@uunet.uu.net
Subject: TM-733 Mods Needed.

To: info-hams@ucsd.edu

In article <11AUG199412592700@elroy.uh.edu>,

Brad Killebrew N5LJV <st3qi@elroy.uh.edu> wrote:

>If this is a repost, sorry. I'm having difficulty with my e-mail editor.

>

>I'm in need of the extended RF mods for the Kenwood TM-733 dual-band mobile
>radio. Also, any technical or operational tips. Thanks.

If your "need" is truly a legitimate need, as opposed to simply a personal desire for the capability to transmit outside of the ham bands, you can send a fax on agency letterhead to 310/631-3912 (Kenwood Service Dept), Attn: Clifford.

Tim

> >--

>Brad A. Killebrew N5LJV, EMT-B	Student of Computer Engr Technology
>President, University of Houston ARC	University of Houston, Texas
>Internet: st3qi@jetson.uh.edu	U of H Amateur Radio Club WB5FND
>AMPRnet : n5ljv@sugarland.ampr.org	uharc@post-office.uh.edu
>Packet : n5ljv@f6cnb.#setx.tx.usa.na	Box 85-T2, 4800 Calhoun, 77204-4083
>AT&Tnet : 713-852-8523 Fax 852-2630	For info, finger st3qi@jetson.uh.edu

--

Tim Tyler Internet: tim@ais.org Packet: KA8VIR @WB8ZPN.#SEMI.MI.USA.NA
P.O. Box 443 C\$erve:72571,1005 GEnie:Sneaker AOL:Hooligan MCI: 442-5735
Ypsilanti MI
48197 If you must drink & drive, please wear a condom.

Date: 11 Aug 1994 20:49:08 -0600

From: mnemosyne.cs.du.edu!nyx10.cs.du.edu!not-for-mail@uunet.uu.net

Subject: TM-733 Mods Needed.

To: info-hams@ucsd.edu

In article <32e8o2\$pih@umcc.umcc.umich.edu>,

Tim Tyler <tim@umcc.umcc.umich.edu> wrote:

> If your "need" is truly a legitimate need, as opposed to simply a
>personal desire for the capability to transmit outside of the ham bands,

How about a personal desire to transmit on the *entire* 420-450 MHz amateur band? The 733 won't transmit all the way down, and there are legitimate reasons to transmit there on FM, like testing of auxiliary links operating between 420 and 430.

--

Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can
jmaynard@admin5.hsc.uth.tmc.edu | adequately be explained by stupidity.

"From now on, when someone asks you where you're from, you tell 'em
'Houston, city of champions!'" -- Rudy Tomjanovich

Date: Thu, 11 Aug 1994 21:52:12 GMT
From: news.cygnus.com!cygnus.com!rob@uunet.uu.net
To: info-hams@ucsd.edu

References <32966a\$504@agate.berkeley.edu>, <S0-
PATU.94Aug10084214@stekt14.oulu.fi>, <1994Aug10.135433.15459@ke4zv.atl.ga.us>
Subject : Re: Crossband repeating rigs & auto IDers

gary@ke4zv.atl.ga.us (Gary Coffman) writes:

>The best way is still to set up a true in-car repeater system on 440
>and have a TT controllable link to 2 meters. That solves both the
>hang time problem, and the ID problem since the in-car repeater
>can have automatic ID. I note with interest that the new SERA 440
>bandplan has provision for low power CTCSS controlled repeaters for

I'm interested in this as well, where could I get such a repeater ? Cost ?

- rob -

--

Cygnus Support	<< KERNEL: Panic, core dumped >>	Headquarters
PO Box 1548	Darkstar crashes,	1937 Landings Drive
Nederland, CO 80466	pouring its light into ashes,	Mountain View, CA 94043
+1 (303) 258-0506	reason tatters, ...	+1 (415) 903-1400

Date: 11 Aug 94 15:27:20 -0500
From: ulowell!ulowell!aspen.uml.edu!martinja@uunet.uu.net
To: info-hams@ucsd.edu

References <32bm8a\$iu2@news.csus.edu>, <32bot3\$45r@agate.berkeley.edu>,
<bentti-110894082542@m32003.esl.com>°
Subject : Re: Which code learning method? Why?

In article <bentti-110894082542@m32003.esl.com>, bentti@pebbles.esl.com
(Davin Bentti) writes:

> Now for a newbie question. What is "Farnsworth"? I am very confused
> as to how something can be 5WPM _and_ 16WPM at the same time.

> How do I learn code Farnsworth?

Hi Davin,

I'm sure many answers will accompany this one. This answer along with all the others should give you a clear idea what this method is.

The Farnsworth method of learning code involves spacing and character speed. If you sent a 5WPM character {the letter "A"} [diiiiit daaaaaah] at a 5WPM spacing [approximately two seconds between characters] and then sent that same character again you would have...well....5WPM at a 5WPM spacing. Sounds like, diiiiiit daaaaaah --one-thousand-one one-thousand-two-- diiiiiit daaaaaah. But, let's say you sent an 18WPM character [Dit dah instead of diiiiiit daaaaaah] at a 5WPM spacing: dit dah --one-thousand-one one-thousand-two-- dit dah; the character, itself, sounds faster but you still have that approximate two second spacing between each character--and now the spacing seems longer. The faster the character speed the longer the spacing seems. Kinda like it gives you more time to figure out what the sent character was.

The actual goal is to not have to think about it as you decode each character. Kinda like learning another language. That only comes with practice and eventually you will be hearing whole words and not just characters. That's down the road apiece for a beginner though.

Good luck if you decide to go for it. It's not really as bad as *some* are making it out to be. And please don't judge ham radio by what you may read on your monitor's screen. You have to try it out for yourself and make your own decision on that. Don't let a few naysayers make that decision for you.

73 de WK1V

-jim-

End of Info-Hams Digest V94 #902
